DOCUMENT RESUME

ED 238 876 SP 023 649

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TITLE Using Research in Preservice Teacher Education.
INSTITUTION Texas Univ., Austin. Research and Development Center for Teacher Education.
REPORT NO RDCTE-9036
PUB DATE Feb 83
NOTE 28p.; Paper prepared for the Improving Preservice Teacher Education Project.
PUB TYPE Information Analyses (070) -- Viewpoints (120)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Educational Research; Higher Education; *Preservice Teacher Education; *Program Content; Research and Development; Teacher Behavior; *Teacher Characteristics; *Teacher Education Curriculum; Teacher Education Programs; *Teacher Effectiveness; Teaching Models
IDENTIFIERS Stages of Concern

ABSTRACT

This paper speculates about research findings that can be potentially powerful as content for preservice teacher education and influential upon the delivery of that content to prospective teachers. The primary source for the research findings which appear in the paper is the body of information prepared for the conference "Research on Teaching: Implications for Practice," held at Airlie House, February 25-27, 1982 and sponsored by the Teaching and Instruction Division of the National Institute of Education. This paper has five major sections. First, a conceptualization of a "good" teacher is presented. Second, a research-based justification for believing that current preservice programs do not contribute to certain aspects of this conceptualization is discussed. Third, selected research findings are suggested as possible content for preservice programs in the belief that they will promote the desired conceptualization. Fourth, research findings which can be used as guides or suggestions for conducting preservice programs are advanced. Concluding comments comprise the fifth section. (JMK)

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USING RESEARCH IN PRESERVICE TEACHER EDUCATION

Paper Prepared for the Improving Preservice Teacher Education Project
Detroit, Michigan
February, 1983

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The purpose of this paper is to speculate about research findings that can be (1) potentially powerful as content for preservice teacher education and (2) influential upon the delivery of that content to prospective teachers. The primary, although not only, source for the research findings which appear in the paper is the body of information prepared for the conference Research on Teaching: Implications for Practice, held at Airlie House, February 25-27, 1982 and sponsored by the Teaching and Instruction Division of The National Institute of Education.

Organization of the Paper

This paper has five major sections. First, a conceptualization of a "good" teacher is presented. Second, a research-based justification for believing that current preservice programs of teacher education do not contribute to certain aspects of this conceptualization is discussed. Third, selected research findings are suggested as possible content for preservice programs in the belief that they will promote the desired conceptualization. Fourth, research findings which can be used as guides or suggestions for conducting preservice programs are advanced. Concluding comments end the paper.

What Is A "Good" Teacher?

Many propositions about what good teaching is can be found in professional literature, newspaper articles, community talk, and individuals' perceptions. In that this paper suggests certain research findings which I

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believe to be important for inclusion in a program of preservice teacher education, I believe it necessary that the reader understand the point of view which guides the selection of findings. This point of view is probably best expressed by presenting a profile of what I consider to be a "good" teacher. With this profile in mind the reader can see the relationship between the findings selected for inclusion in this paper and my notion of "good."

There are probably as many conceptions about teachers as there are persons who have come in contact with them. These conceptions will range from the "strict but kindly" teacher (remember Miss Dove?) through the bumbling but eventually effective academician (Mr. Chips?) to the slightly acerbic and mishap-prone post teen-ager (Miss Brooks?). In all likelihood, however, these and other stereotypes would be shaped and modified by one's world view, one's notions about the role of school in the society, a set of ideas about the past and the future, the strength of one's convictions regarding the nature of learning groups, and so forth. What follows in this section is a set of teacher characteristics which I value and which have been formed by a life of involvement with teachers, schools, and classrooms.

I will start with the teacher as a classroom leader and authority figure and move outward from that central focus to other contexts. My version of a good teacher is one who is well-organized, alert to classroom events, concerned about classroom groups as well as about individuals, and skillful in the management of a complex social system. This management takes the forms of exercise of "teacher authority" and delegation of decision making to students. Further, the management is rooted in a set of beliefs about authentic leadership and emergent leadership. The class members' views are solicited and actively listened to. There are opportunities for students to work independently and in both small and large groups. The classroom environment

can be characterized as orderly, friendly, attractive, and, with occasional planned exceptions, academically purposeful.

Among the teacher's contributions to this environment are an ability to diagnose cognitive, affective, and social behaviors of students, act upon the diagnoses in meaningful and informed ways, and reflect upon the apparent effects of his/her actions. The teacher monitors the understandings of the students systematically and continuously. This monitoring is obvious to students and observers alike. The teacher is able to monitor behavior as well as to monitor less demonstrable learning because advance planning and continuous evaluation takes place. Further, the teacher uses information collected during monitoring as a means to make instructional decisions as well as for the purpose of making judgments about students.

The teacher is in command of subject matter. S/he is also aware of a set of options about how to deliver that subject matter so that effective, efficient, and long-term learning takes place. When it is necessary to move beyond what is already known, the teacher engages in self-study about both content of instruction and nature of instruction. The self-study is a part of sense-making, a central aspect of being a teacher, and is transmitted as a valued enterprise to students.

The teacher interacts with others in the school. S/he recognizes that the school's members have shared problems and works with others on issues of particular concern to the school. S/he solicits advice and seeks counsel among colleagues, teachers and administrators. The teacher seeks out opportunities to be a "voice" about school matters, an authority with a forum.

The teacher understands the power of the home-school relationship and acts upon that understanding by formulating, coordinating, and participating in opportunities to engage that power for the good of individual students and

the school as a whole. S/he engages parents in the enormously important tasks associated with educating a citizenry. S/he faces controversy not quixotically but rationally and with convictions based upon a well-developed set of values which can be articulated readily. And the teacher understands the difficulties related to providing educational opportunities to a heterogeneous population.

The teacher is aware of his/her central but often maligned role in the problem-laden social institution of the school. This awareness, instead of leading to a sense of defeatism or, perhaps worse, resigned indifference, leads to a commitment to re-create that institution. In doing this, the teacher participates with others in problem solving, formulating and testing changes, sharing successes (and failures) with colleagues, and adopting and adapting solutions to persistent dilemmas. In this, the teacher is a central decision maker, aware of the complex nature of schooling, capable of adjusting ideas and behavior when evidence suggests the need, and "sees" situations from multiple perspectives even when those perspectives are contrary to his/her own.

In going about the work of teaching, my version of the good teacher is guided by a set of carefully formulated values, beliefs, information, and skills. The teacher is a learner, a person whose professional education did not end upon receipt of an undergraduate or graduate degree and license to teach. S/he learns through experience and reflection, participating in professional organizations, electing to be a part of formal educative programs, and staying informed about the advances in teaching and schooling as a consequence of independent initiative.

In summary, my "good" teacher is a knowledgeable, well-organized and consistent classroom leader who interacts with students, colleagues, and

patrons purposefully and effectively. S/he sees teaching as more than "meeting students" and works with peers on identifying and acting upon problems at classroom and school levels of the system. The teacher values this opportunity to be an integral school decision maker and is valued by others because s/he is perceptive and knowledgeable about desirable practice.

I suspect that the most common response to this brief and necessarily incomplete picture of Superteacher is, "Good grief!" But I have known such teachers and, perhaps more important in terms of the purposes of this paper, I have also known teachers who could have matched this profile if they had been involved in different educating and socializing opportunities.

The Outcomes of Current Practice

My colleagues and I at the Research and Development Center for Teacher Education are currently completing a large-scale, multi-method, multi-site study of student teaching (Griffin, et. al., 1983). This descriptive study examined personal and professional characteristics of student teachers, cooperating teachers, and university supervisors; observed student teachers and cooperating teachers in classrooms over a twenty-week academic semester; analyzed the formal and informal properties of university and public school contexts; inquired into the nature and form of supervision of student teachers; and drew conclusions about the outcomes of student teaching in particular and, inferentially, preservice teacher education in general.

Our findings suggest that, at least in the settings included in our study, the preservice teacher education sequence with emphasis upon student teaching was less comprehensive in scope and less influential on practice than we had initially expected. Further, our observations of programs other than the ones we examined lead us to believe that our findings are not atypical of such professional education programs.

Included in our conclusions regarding student teaching are the following.

> First, the disciplined inquiry into schooling in general and teaching in particular which has characterized the past several decades has apparently made little impact upon the policies and practices of student teaching. . . .
>
> Second, participants in the student teaching experience as observed in this study can be characterized as dedicated, well-meaning, and caring individuals who base their actions in a service orientation. That is, the cooperating teachers and university supervisors operate out of a perspective which promotes the well-being and comfort of the self rather than one which acts upon a set of carefully articulated performance standards for professional practice. . . .
>
> Third, student teacher participants in this study were exposed to situation-specific teaching strategies rather than to options for selection decisions. . . .
>
> Fourth, awareness of policies, expectations, purposes, and desirable practices is not widespread across participants in the student teaching experience. . . .
>
> Fifth, there was only minimal evidence that the student teaching programs studied were integrated substantively or ideologically in the university preservice programs of instruction. There appeared to be no carefully conceptualized "point of view" driving the experience. . . .
>
> Sixth, there were few instances of demonstrated policy, practice, or personal linkages between the university and the public school settings. . . .
>
> Seventh, the student teaching experience can be characterized somewhat as the teaching profession has been -- as a "lonely" profession. In the same way that practicing teachers tend to be isolated from their colleagues by the nature of the school organization and by the ways in which schools have been designed, the student teacher-cooperating teacher dyad appears to be isolated from other dyads and, indeed, from other cooperating teachers and student teachers. . . .
>
> Eighth, the student teaching experience as a "gatekeeping" or sorting function appears to be functioning minimally. . . .

These conclusions arise out of a painstaking examination of large bodies of information collected during the course of the study. They can be seen as logically antithetical to the conceptualization of the good teacher with which this paper began. Further, in that student teaching is typically believed to be the most important and influential component of preservice teacher

education, it is likely that the practices we observed in our study will persist as the students of teaching move into their career placements.

My concern, along with many others, is that we can (and should) use the preservice teacher education program as a means to promote the acquisition of knowledge and skill which has been shown to be related to positive pupil, class, and school outcomes. This position leads to the examination of the knowledge we have, knowledge derived from systematic and disciplined inquiry. Naturally, research findings will not be the sole source of guidance for teachers or for teacher educators. As Maxine Greene (1973) has written about the relation of philosophy and teaching,

> Unlike the individual in a more ritualized, closed culture, the teacher is free to stand off and look at orthodoxies and sacred writs, just as he is free to see how the conventions of his language limit and enclose his world. Most important, the teacher can become self-conscious about his role in the sense-making process. If he recognizes this role, he will have intensely personal reasons for clearing up ambiguities and for raising questions about what "reality" means, what "truth" means, what "the good" implies. Then, of course, the teacher is primed to do philosophy (p. 10).

The teacher <u>will</u> engage in sense-making through putting systems of thought to bear upon school and classroom life. The teacher will also use personal experience and other so-called "craft knowledge" as s/he moves through the complexities involved in teaching and learning. The point to be made here, however, is that there is a growing body of knowledge supported by evidence of effectiveness and to ignore that body of knowledge in teacher preparation programs is to ignore a significant resource for teachers.

Research Findings as Content for Preservice Teacher Education

As noted earlier, the primary source of research findings for this paper is the set of presentations prepared for the Airlie House Conference. In this section I will discuss briefly selected findings from those presentations. The

reader is urged to examine the original sources in that the summaries here do not do justice to the more specific discussions.

Teacher educators face an extremely difficult task when they work together to plan an integrated, content-rich, knowledge-based, experience-oriented program for preservice students. The array of options for inclusion in a professional sequence is wide and varied. The theoretical and practical perspectives are most often disparate and occasionally conflicting. What is included here are suggestions for content which appear logically to be related to the conceptualization of the teacher which appears earlier in the paper. There is no surety built into these suggestions. That is, there is little evidence available currently to help us predict that they can be taught effectively to preservice students or that the preservice program is the place to teach them. Their inclusion in this paper is based upon a set of logical propositions rather than rational-empirical calculations.

The research findings which probably have the most logical place in the preservice program of teacher education are those which are directly tied to classroom interactions. These findings were summarized elegantly by Brophy (1982) and Rosenshine (1982). Brophy surveyed the research literature on classroom organization and management and Rosenshine examined teaching functions.

The conventional means to determine effectiveness in the research reported by Brophy and Rosenshine is scores on standardized achievement tests. That is, teachers who exhibited the behaviors noted here worked with students who demonstrated test scores higher than did students in classrooms where the teacher behaviors were not observed. There was, in research terms, a significant correlation between observed teacher behaviors and pupil test scores. This, of course, is not the only (or necessarily the best) way to

provide testimony to teacher effectiveness. It is, however, important and fits the tenor of the times in terms of teacher accountability for student achievement.

Brophy included research conducted by "teams of investigators [that] developed clear and detailed information about how successful teachers organize and manage their classrooms (p. 1)." He makes the important point that a well-organized and efficiently managed classroom is a prerequisite for an orderly and effective instructional program by systematizing routines such that both students and teacher are aware of the ways in which work can be accomplished and interactions can be productive. His argument includes attention to the research observation that a well-organized classroom allows for time and energy to be expended upon the important tasks of teaching and learning. A major point in the review is the one which points out that the well-organized classroom is a result of systematic and concerted teaching of rules and procedures and not a consequence of haphazard and sporadic efforts to control student behavior. Research tells us that the time and effort spent on teaching the "rules of the game" is returned manyfold in freeing teachers and students to engage in important instructional activities. As Brophy says, "To an untrained observer, the classroom seems to work automatically, without much teacher effort devoted to classroom management. . . . [S]uch well-functioning classrooms do not just happen. Instead, they result from consistent teacher efforts to create, maintain, and (occasionally) restore conditions that foster effective learning (p. 4)."

Kounin's (1970) important contributions to our understanding of effective classroom management are reviewed by Brophy. Kounin presented five recommendations for teacher behavior. Withitness is the teacher's ability to be continually conscious of classroom events such that inappropriate behavior

can be spotted quickly. Overlappingness describes the teacher who is able to do more than one thing at a time, such as working with an individual student while still monitoring what is happening in the other sections of the classroom. Signal continuity and momentum in lessons refers to the set of behaviors which describes good preparation, brisk pacing of lessons, few interruptions or false starts, no backtracking, and the ignoring of relatively minor instances of inattention by students. Teachers who use this set of behaviors "move near to the inattentive students, use eye contact where possible, direct a question or comment to them, or cue their attention with a brief comment (p. 7)." Group alerting and accountability in lessons includes "looking around the group before calling on someone to recite, keeping the students in suspense as to whom would be called on next by selecting randomly, getting around to everyone frequently, interspersing choral responses with individual responses, asking for volunteers to raise their hands, throwing out challenges by declaring that the next question would be difficult or tricky, calling on listeners to comment upon or correct a response, and presenting novel or interesting material (p. 8)." Variety and challenge in seatwork is self-explanatory.

Regarding seatwork, Brophy reports Brophy and Evertson's (1976) admonition that seatwork should probably provide students with a success rate of 70-80% when the teacher is present to respond to individual requests for assistance and 95-100% where students are expected to work on their own.

Each of us has seen teachers who engage in these sets of behaviors. The issue for this paper is that operational descriptions of these behaviors and opportunities to learn about them, observe them, and practice them in preservice programs are not as frequent as might be desired.

Brophy also reviews the important research which has demonstrated the importance of a smooth and well-orchestrated beginning of the school year (Anderson, Evertson, & Emmer, 1980; Emmer, Evertson, & Anderson, 1980; Evertson, Emmer, Clements, Sanford, Worsham, & Williams, 1981). These studies, descriptive/correlational and experimental, provide testimony to the contribution of effective management to classroom climate and student outcomes. The studies focused on both elementary and junior high school classrooms and emphasized the need for teachers to deal with readying the classroom, planning rules and procedures, consequences, teaching rules and procedures, beginning school activities, strategies for potential problems, monitoring, stopping inappropriate behavior, organizing instruction, student accountability, and instructional clarity. These aspects of teaching are treated with specificity, clarity, and precision in a very readable and easily used manual for elementary teachers (Evertson, Emmer, Clements, Sanford, Worsham, & Williams, 1981).

The manual referred to immediately above is recommended highly as a tested means to increase the frequency of the effective management behaviors noted in this section. The manual has been used with new teachers and career teachers with positive consequences.

Brophy discusses the persistent finding in classroom research that points to the fact that the "key to effective classroom management is prevention (p. 17)." Prevention here is dependent upon a systematic attention to classroom rules and procedures by the teacher prior to the opening of the school year and consistent attention to them during the school year.

In terms of group relationships, Brophy cites work which has evaluated the Jigsaw approach (Aronson, et. al., 1978) in which each member of a group has a "key item" necessary to the solution of a problem, the Teams-Games-

Tournaments approach (Slavin, 1980) which depends upon group members' contributions to academic classroom activities for earning points toward prizes, and other strategies which cause groups to come together for the purposes of positive interactions. Brophy also discusses behavior modification techniques but concludes that "reinforcement oriented approaches to classroom management which depend on the teacher as the dispenser of reinforcement are impractical in the typical classroom, where a single teacher must deal with 30 students (p. 27)."

Rosenshine's review of teaching functions in instructional programs reports on a set of experimental studies in which teachers in service were able to demonstrate effective teaching behaviors after minimal training by researchers. (See the comments on page 8 about how effectiveness was determined.) Good and Grouws' (1979) study demonstrated that teachers in the experimental group "were much higher in conducting review, checking homework, actively engaging students in seatwork, and making homework assignments (p. 2)." Likewise, Fitzpatrick's (1982) study showed that treatment teachers of ninth grade algebra and foreign language "were higher in attending to inappropriate student behavior, commanding attention of all students, providing immediate feedback and evaluation, having fewer interruptions, setting clear expectations, and having a warm and supportive environment (p. 2)." In both the Good and Grouws and the Fitzpatrick studies, the training to accomplish these results consisted of a manual of instructions and two group sessions with researchers. (This is approximately the same type of intervention used in the Evertson, et. al., 1981, study cited above.)

Rosenshine urges teacher educators to use the materials of these studies in both preservice and inservice settings. My caution is that the conditions of learning are very different for preservice and inservice clients. Clearly,

the preservice person needs an environment in which to practice and, one would hope, eventually demonstrate the behaviors. Further, the preservice student needs the opportunity to integrate these behaviors into a system of thought and action regarding teaching. To suggest to a relatively school-naive person that s/he "monitor," for instance, is insufficient. The ongoing complexities of the classroom need to be known and understood prior to the acceptance of "monitoring" as a desirable and necessary teacher behavior. This and related issues will be discussed later in this paper.

Rosenshine provides a very realistic and valuable list of effective teacher behaviors drawn from research findings. He includes in his list:

> structure the learning
>
> proceed in small steps but at a brisk pace
>
> give detailed and redundant instructions and explanations
>
> provide many examples
>
> ask a large number of questions and provide overt, active practice
>
> provide feedback and corrections, particularly in the initial stages of learning new material
>
> have a student success rate of eighty percent or higher in initial learning
>
> divide seatwork assignments into smaller assignments
>
> provide for frequent monitoring during seatwork
>
> provide for continued student practice so that students have a success rate of ninety to 100 percent and become rapid, confident, and firm (pp. 3-4)

Rosenshine provides a useful table in which he offers summary statements regarding the teaching functions related to effective teaching which emerge from research. The table is reproduced on the next page. I believe that

(ORIGINALLY PRESENTED IN ROSENSHINE, B. Teaching Functions in Instructional Programs, paper prepared for the conference Research on Teaching: Implications for Practice, Airlie House, Virginia, February 25-27, 1982.)

Table 1

INSTRUCTIONAL FUNCTIONS

1. Daily review, checking previous day's work, and reteaching (if necessary).

   checking homework
   reteaching areas where there were student errors

2. Presenting new content/skills

   provide overview
   proceed in small steps, (if necessary), but at a rapid pace
   If necessary, give detailed or redundant instructions and explanations
   new skills are phased in while old skills are being mastered

3. Initial student practice

   high frequency of questions and overt student practice (from teacher and materials)
   prompts are provided during initial learning (when appropriate)
   all students have a chance to respond and receive feedback
   teacher checks for understanding by evaluating student responses
   continue practice until students are firm
   success rate of 80% or higher during initial learning

4. Feedback and correctives (and recycling of instruction, if necessary)

   Feedback to students, particularly when they are correct but hesitant.
   Student errors provide feedback to the teacher that corrections and/or reteaching is necessary.
   Corrections by simplifying question, giving clues, explaining or reviewing steps, or reteaching last steps.
   When necessary, reteach using smaller steps.

5. Independent practice so that students are firm and automatic

   seatwork
   unitization and automaticity (practice to overlearning)
   need for procedure to insure student engagement during seatwork (i.e., teacher or aide monitoring)
   95% correct or higher

6. Weekly and monthly reviews

   reteaching, if necessary

Note: With older, more mature learners then (a) the size of step in the presentation is larger, (b) student practice is more covert and (c) the practice involves covert rehearsal, restating, and reviewing (i.e., deep processing or "whirling").

every prospective teacher should, at the very least, be aware of these findings regarding classroom management and instructional functions. It would be better, of course, if every prospective teacher had the opportunity to practice and demonstrate them. My reason for this recommendation is not to force prospective teachers into a particular mold but to provide them with an array of options for teaching activity. The teacher who understands that there is a wide range of opportunities for participating in classroom life will, I believe, be better equipped to deal with the complexities of the dailiness of schooling.

Two other valuable resources regarding research on teaching are the syntheses prepared by Barnes (1982) and Good (1982).

Another body of research which has produced findings of potential value to preservice students centers around the ways in which schools operate as social organizations. Some of the research studies focused on the school as an institution and describe, others examined how schools change, others suggested how teachers and other school persons can solve problems productively and efficiently. In other words, the teacher's relation to the school culture was examined.

I believe that prospective teachers should be aware of the nature of schools as they are and as they could be. Too often we encounter career teachers who wear the blinders of a lack of awareness of options and possibilities, who believe that the status quo is "the way it's spozed to be," who cannot conceive of having a participatory role in school governance and problem solving. (There are, of course, teachers who elect not to be active in schools beyond their classroom participation. In this section I am referring to teachers who are not consciously aware of the differences they could make in their workplaces.)

Prospective teachers should know about the characteristics of the contexts in which they will spend much of their lives. These contexts, schools and school systems, are complicated by their very nature but even more complicated because they are social service institutions, ones which demand a sensitivity to the rest of the world. Teachers are expected to be many things by many people. They are expected to be sympathetic to the problems of homes and families, knowledgeable about the society in which they serve, perceptive when dealing with controversial issues, responsive to the demands of children, parents, and other adults in the community. And so on. This complexity can be dealt with from a defeatist ("There's nothing I can do") stance or a constructive one ("What can I do?").

It will not be surprising that my point of view is toward empowering the prospective teacher with certain knowledge and some skill in relation to living and working productively in school settings. I believe the research sketched briefly in this section will contribute toward that empowerment.

Although he paints a somewhat gloomy picture of schools and of teachers, Schlecty's (1982) Airlie House paper offers a set of suggestions about how to think about teaching as work. In particular, he suggests that prospective teachers be presented with a conceptualization of the school as a workplace. This way of viewing schools could be used by preservice students to examine, analyze, and develop understandings of teaching as supervision of learning. The move toward thinking of the school as a workplace would, perhaps, help prospective teachers to realize that there is a good deal more to teaching than positive interpersonal relationships with children. Schlecty's analyses and proposals, further, could be used as a discussion point among teacher educators as they examine their own practices and programs.

It seems important to me that prospective teachers be helped to understand the emerging knowledge regarding what "effective" schools are. In the study of student teaching mentioned earlier (Griffin et. al., 1983), student teachers were asked at the end of the student teaching experience to describe the school in which they would like to teach. Beyond some statements of the order of "a school much like this one," these prospective teachers had no ideas about what sort of school they would like to be assigned to. My own hunch is that these students had spent a great deal of their preservice professional sequence dealing with classroom issues and very little time (if any) in a guided analysis of how the school ethos impacts upon the life of the classroom.

Although they look at effective schools research somewhat askance, Purkey and Smith (1982) provide an overview of that body of knowledge. If preservice students could be helped to see how the various descriptions of effectiveness manifest themselves in school settings, they might be more knowledgeable in both their selection of a workplace and in their collegial interactions once placed. Purkey and Smith cite Edmonds' (1979) conclusions regarding effective schools: ". . . strong administrative leadership, high expectations for children's achievement, an orderly atmosphere conducive to learning, an emphasis on basic skill acquisition, and frequent monitoring of pupil progress (p. 4)."

An important aspect of the Purkey and Smith paper is that the authors present reasoned critiques of the research from which such lists as Edmonds' are derived. This critical stance is valuable for the preservice student who, too often, accepts "research" much as though it were holy writ. My own experience includes teaching graduate courses in several institutions and I have been continually surprised by the lack of critical skills teachers and

school administrators bring to research. I would hope that preservice students could be exposed in a systematic, if limited, way to research so that they can be critical consumers as they become more sensitive to the nature of schools, classrooms, and learners. The Purkey and Smith paper could be a stimulus toward this end.

Edmonds' (1982) paper provides a point of view regarding the relation of effective classrooms and effective schools. He notes that "[f]rom a conceptual point of view both groups of researchers emphasize behaviors within the school as the major determinants of achievement in basic school skills. Both groups of researchers depend on the discovery of effective practice in contrast to invention of recommended practice theorized to improve achievement. Furthermore the correlates of effective schools and effective classrooms derive exclusively from the environment over which local schools have control (p. 19)." Preservice students could use the Edmonds propositions as ways to examine schools and classrooms beyond the typical (and also valued) practice of observing only teacher interactions with students.

Although it may be too ambitious an undertaking to expect preservice students to be concerned and knowledgeable about issues related to changing schools, I believe that an awareness of the possibilities for change should be part of a new teacher's repertoire. The purpose here is basically consciousness raising and associated with the notions about schools as organizations presented above. The prospective teacher who has some understanding of the potential for change, given certain configurations of variables, may be more receptive to activities related to change.

Fullan (1982) points to the relation between the individual school member and school variables. He makes the point that implementation "consists of the process of putting into practice (or failing to do so) an idea, program or set

of activities new to the people attempting or expected to change (p. 5)." In his paper he presents a lucid discussion of the factors affecting implementation with particular attention given to the characteristics of the change, characteristics at the school district level, school level factors, and external factors. His elucidation of what these factors mean is clear and could be used as an analytic framework for prospective teachers' examination of schools as organizations.

Two of the Airlie House papers deal specifically with students. Weinstein (1982) presents a comprehensive review of a large number of studies which inquired into student perceptions of schooling and Green (1982) discusses the studies which have examined teaching as a linguistic process. Although these papers are exemplary in their demonstration of scholarship, I am not sanguine about the appropriateness of their content for preservice teacher education students. The content is of potential value, however, if knowledgeable teacher educators can "sift and sort" through the references. An important question for planners of teacher education programs is the degree to which the content provides a balance across the multiple phenomena which could form the programs. Certainly, attention to the characteristics of students deserves (and has earned) a place in a preservice program. The degree to which student perceptions and linguistic patterns are appropriate for inclusion will have to be determined by individual program developers.

What the research findings in the Green and Weinstein papers may contribute to is an awareness of the multiple modes of sending messages in classrooms, an understanding that "talk" is different according to purpose and function, that discourse has rule differences, that teachers can be sensitive to students perceptions of schooling and understand how students influence instruction, and that students and teachers perceive classrooms differently.

This section has presented research findings which I believe have some potential contribution to make in promoting the conceptualization of a good teacher which appears in the first section of this paper. Naturally, this brief summary does not do justice to either the original studies or the reviews prepared for the Airlie House conference. It is hoped that the summary will, however, provoke teacher educators to examine the sources cited in an attempt to recreate teacher preparation programs.

Research Findings as Guides to Program Characteristics

I do not believe it is sufficient for this paper to serve only as a set of suggestions for content of preservice teacher education programs. I believe that research findings can also be helpful in making decisions about how to present the content to students. This belief is strengthened by my participation in several decades' worth of proposals aimed at content inclusion with few concommitant recommendations regarding how the content can be assimilated into already overcrowded courses of study. My concern here is not for conventional academic offerings (which will no doubt persist) but for research-derived learning strategies which can provide early career opportunities for teachers to be inquirers, discoverers, problem solvers -- in short, to demonstrate a number of the characteristics of my idea of a good teacher.

The suggestions in this section have emerged as a consequence of examining only two bodies of research: collaborative problem solving and staff development.

Ward and Tikunoff (1982) present a comprehensive examination of collaborative research studies and conclude that collaborative strategies "should be used for conducting a portion of the educational research and development effort at the national, state, and local education levels. The

more the r and d outcomes are intended to result in improvements in education that are to be used by classroom teachers, the more important the use of the strategy becomes. . . .(p. 45)." The position taken here reflects the position that school-based, practitioner-driven, usefulness-oriented studies of schooling will result in positive changes in and greater understanding of schooling processes.

Interactive Research and Development (IR&D) has been demonstrated to be effective for inservice teachers in providing them with opportunities to engage in systematic problem solving such that they become more "in control" of their own practices. In all of the demonstrations of the practice (Tikunoff, Ward, & Griffin, 1979; Huling, 1981; Griffin, Lieberman, & Jacullo-Noto, 1983) it has been found that participants develop an increased understanding of the natures of their workplaces, a greater sense of professionalism, a more rigorous approach to examining suggestions for practice, a more "in charge" attitude regarding classroom and school activity, and a set of altered teaching practices.

The IR&D strategy depends upon the interaction of a team composed of a group of practitioners (or, for the purposes of this paper, practitioners-to-be), a researcher, and a trainer/developer. The team decides upon a school problem, develops a means to study it, presents findings from the study, translates the findings or the research processes into learning opportunities for other practitioners, and evaluates the process. Studies using the strategy thus far have dealt with such issues as teachers' strategies for coping with classroom distractions, the relation of teacher mood to positive instructional practices, the characteristics of teachers who demonstrate positive attitudes toward teaching, preventing disruptive behaviors among high school students, children's perceptions of writing tasks, and others.

The IR&D strategy seems to be an appropriate means to involve preservice students and their instructors in systematic inquiry and reflection. Further, it promotes the positive value of problem solving (as opposed to resignation), interaction with other educational roles (as opposed to isolation), critical examination of research procedures and findings (as opposed to unqualified rejection or acceptance), teamwork (as opposed to "doing one's own thing"), and institutional awareness (as opposed to insularity). It is my hunch that the strategy, if participated in during a professional preservice sequence, would have a marked impact upon prospective teachers and would contribute to the professionalization of the teaching force because of its emphasis on systematic inquiry.

Staff development research, by definition, has dealt with the programs and activities which have been formulated to provide growth opportunities for teacher practitioners. One can infer, however, that certain of the findings in studies of staff development could be translated into programmatic dimensions of preservice programs. I would recommend the following for that purpose.

Berman and McLaughlin (1975) contributed to our understanding of schools as organizations and means to change those organizations. Their concept of mutual adaptation is a powerful construct in terms of developing an understanding of the problems (and prospects) associated with school change. Prospective teachers could use the findings and methods of this study as a framework for examining and analyzing school culture.

The Devaney (1975) study of teacher centers could be used as a set of guidelines for the establishment and operation of a university campus-based center for prospective teachers. A teacher center for preservice students would accommodate the need for a "neutral" space for deliberating about

teaching, for developing materials for teaching, for reflecting upon one's initiation into the teaching force, and for gaining access to needed human and material resources.

I would recommend strongly that the Concerns-Based Adoption Model (CBAM) be made a part of the diagnostic repertoire of teacher educators as their students move into teaching situations. Hall and Loucks (1978) have refined a model originally designed to assess concerns of preservice students such that it provides profiles of subjects' Stages of Concern and Levels of Use of an innovation. The innovation for preservice students is entry into teaching. The teacher educator who knows that students are at varying stages of concern (i.e., what an individual thinks of his/her relation to teaching) can plan group or individual learning opportunities to ameliorate problems and promote growth into the profession. The Stages of Concern profiles would indicate which students need to more aware, are interested in gathering information about teaching, who care about their personal relation to teaching, who are preoccupied with the management of teaching tasks, who are reflecting on the consequences of their teaching, who wish to collaborate with others, and who are interested in changing their practice. As can be inferred, the concerns are developmental. The desirable state of affairs, in this model, is that subjects are concerned about collaboration and change as a consequence of having moved through the other stages. This, of course, may not occur, given the time span covered by teacher preparation programs.

This model, too, can be a device to better understand faculty members in a college or university as program revision occurs. My own view is that it could be a powerful individual diagnostic device. That is, responding to the CBAM instrumentation could result in a personal profile which would give one a

sense of what might be the most appropriate next steps to elect to take in regard to a program or instructional change.

Bentzen (1974) reports on the study of school change conducted by the Institute for the Development of Educational Activities (I/D/E/A) which demonstrated that schools whose faculties moved through a sequenced deliberation about problems were ones most receptive to change. The sequence includes dialogue, decision-making, action, and evaluation (DDAE). It would not be difficult to formulate a set of opportunities for preservice students to work in groups moving through this sequence in response to an academic or field problem. The I/D/E/A study also noted the importance of the peer group as a central mechanism for coming to grips with school problems. Akin to the IR&D strategy discussed above, the peer group strategy requires that there be a systematic and collegial examination of teaching and learning settings. A major understanding in this strategy is that the solutions to problems, as well as the problems themselves, reside more often with the school faculty than with outside "experts."

It is not difficult to envision a set of problem solving opportunities for students employing a "mix and match" strategy which combines elements from interactive research and development, DDAE, and the peer group strategy. A major issue to be faced here, of course, is the reconceptualization of the faculty members' roles from purveyors of information to process monitors and consultants to the peer groups. Another potential problem is that teacher education faculty may believe that their leadership role has been abrogated. This is definitely not the case. This proposal is far removed from "Let the students decide the curriculum." Careful examination of the strategies in their original forms will reveal that the proposed role is demanding in intellectual and personal terms but rewarding. (Lest there be some

misunderstanding, I am not proposing that this suggestion replace current practice entirely, only that it be considered as a complementary component of a total program.)

This section has provided only a brief discussion of how research findings might be translated into elements of preservice teacher education programs. An examination of the Airlie House papers by Ward and Tikunoff (1982) and Griffin (1982) will expand upon these notions and, perhaps, provide impetus to considering other delivery modes.

Conclusion

This paper has presented a set of suggestions for content and process of preservice teacher education. The suggestions were derived primarily from papers prepared for the Airlie House conference, Research on Teaching: Implications for Practice.

These suggestions form one possible body of content and one set of considerations for instruction in preservice teacher education programs. The degree to which they are appropriate for any single program is dependent upon philosophical positions regarding both what good teaching is and what good teacher education is. The research findings in this paper will match certain of these conceptions of "good" and not others. An important issue in this match, however, is that either/or, on/off, black/white positions are probably not very helpful to teachers-to-be. A wide repertoire of possible teaching behaviors is, it seems to me, more desirable than a single set of demonstrable competencies. The teaching behaviors included here could be part of that repertoire.

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